

Cleanroom TL Troffers

1x4, 2x2 and 2x4 High Efficiency LED Luminaires

- **Rated IP65**
- **Suitable for ISO 3-9 Cleanspaces**
- **Suitable for 209E class 100-100,000 Cleanspaces**
- **ETL listed for Wet Locations**
- **One piece Inset Doorframe**
- **Robotically seam welded housing**
- **0-10v 1% Dimming Standard (except 2x2 with HF LED selection)**
- **Recessed Housing suitable for Tbar Grid AND Hardlid Installations**
- **DLC Standard and Premium Configurations Available**
- **Up to 34,000 Lm Delivered @ 125Lm/Watt**
- **Made in the USA by a Family Owned US Corporation**



To See All DLC Listings, Visit www.Kurtzon.com/DLC

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ORDERING GUIDE

Series Installation Material Size Source CCT Voltage Options

TL

Series	Installation Type	Material	Size	Source	CCT	Voltage	Options
TL	R: Recessed (Suitable for Flange & Grid)	3: White 430 SS Hsg. & Polished 304 SS Door	1x4: 1' x 4' Housing 2x2: 2' x 2' Housing OR 2x4: 2' x 4' Housing	1/LEDR	83 CRI: 830 = 3000K CCT 835 = 3500K CCT 840 = 4000K CCT 850 = 5000K CCT 90+ CRI: 935 = 3500K CCT 940 = 4000K CCT 950 = 5000K CCT	120V 277V UNV 347V*	FC: Fuse & Holder (One Supplied Per Circuit) 2/ED: Two Drivers (Two Circuits) EDL: -40F Electronic Driver EM10: 10W Integral LED EM (Specify Input Voltage) EM20: 20W Remote LED EM (Specify Input Voltage) WHT: White Finished Door & HSG LEX: .125" Prismatic Polycarbonate A19: .156" Prismatic P19 Pattern Clear Acrylic HIA: .140" High Impact P12 Pattern Clear Acrylic TG: .156" Prismatic Tempered Glass SW: Wet Locatoin Hub Supplied (not installed) PxL: Programmed to User Specified Lumen Value.∞∞ PxW: Programmed to User Specified Wattage Value.∞∞ 10KV: 10KV Parallel Surge Protection (One Supplied Per Circuit) GTD: Generator Transfer Device WHIP: Must Specify Length and Wire Qty .125 FROST: 1/8" Frost Acrylic Lens HF1: 1% Dimming for 2x2 with LEDHF OCCMW: Internal microwave OCC Sensor
		4: White AL Hsg. & Polished 304 SS Door		2/LEDR			
		5: White AL Hsg. & White AL Door		2/LEDH			
	7: White AL Hsg. & White CRS Door	2/LEDHF					
	S: Surface	1: White CRS Hsg. & White CRS Door	1/LEDR				
		2: White CRS Hsg. & Polished 304 SS Door	2/LEDR				
3: Polished 304 SS Hsg. & Polished 304 SS Door		2/LEDH					
	4: White AL Hsg. & Polished 304 SS Door	2/LEDHF					
	5: White AL Hsg. & White AL Door	2/LEDR					
	6: White CRS Hsg. & White AL Door	2/LEDH					
	7: White AL Hsg. & White CRS Door	2/LEDHF					
		2x4: 2' x 4' Housing	3/LEDR				
			3/LEDH				
			4/LEDR				
			4/LEDH				
			4/LEDHF				

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SPECIFICATIONS

HOUSING: One piece, hole free, robotically seam welded housing has flattened knockouts for a superior seal. Recessed housings are available in .040" 3003 Aluminum or 20Ga 430 Stainless Steel. Surface housings are available in .040" 3003 Aluminum, 20Ga 304 Stainless Steel, or 20Ga 1008 Cold Rolled Steel.

DOOR FRAME: One piece inset door frame with seam welds regressing into housing to allowing the NSF approved microcellular gasket to seal to the housing. Door frame is hinged by aircraft cables and secures to housing with captive stainless steel pan head screws. Available in .040" 3003 Powder coated Alum. , 20Ga 304 Polished SS, or 18Ga 1008 Powder coated CRS.

GASKETS: NSF Listed closed cell microcellular extruded KleanLock SealPro gasket with vulcanized corners making a one-piece oil and solvent resistant gasket system.

LENS: Impact resistant .135" thick virgin acrylic with P12 prismatic pattern inverted. Sealed to door with NSF listed RTV silicone. See "Options" for other choices.

LEDS: Commercially available in a wide variety of Color Temperature (CCT), FLUX, and CRI. Highly efficient and consistent color maintained to 3 SDMC for color critical applications. B50/L70 and compliant with Zhaga recognized hole patterns. Consult factory for LED options or configurations not listed below.

DRIVERS: Standard Universal Voltage Class 2 drivers are 0-10v Dimmable to 1% for most LED configurations. They come with at least 2.5Kv surge protection, have less than 10% THD at max load, Ballast Factor Greater than .95 and are programmable to match specific lumen or wattage requirements. Drivers with higher input voltage ratings are available, consult factory for driver specifications.

REFLECTOR: Die formed metal with high reflectance white polyester powder coat finish. Typical reflectivity 92%.

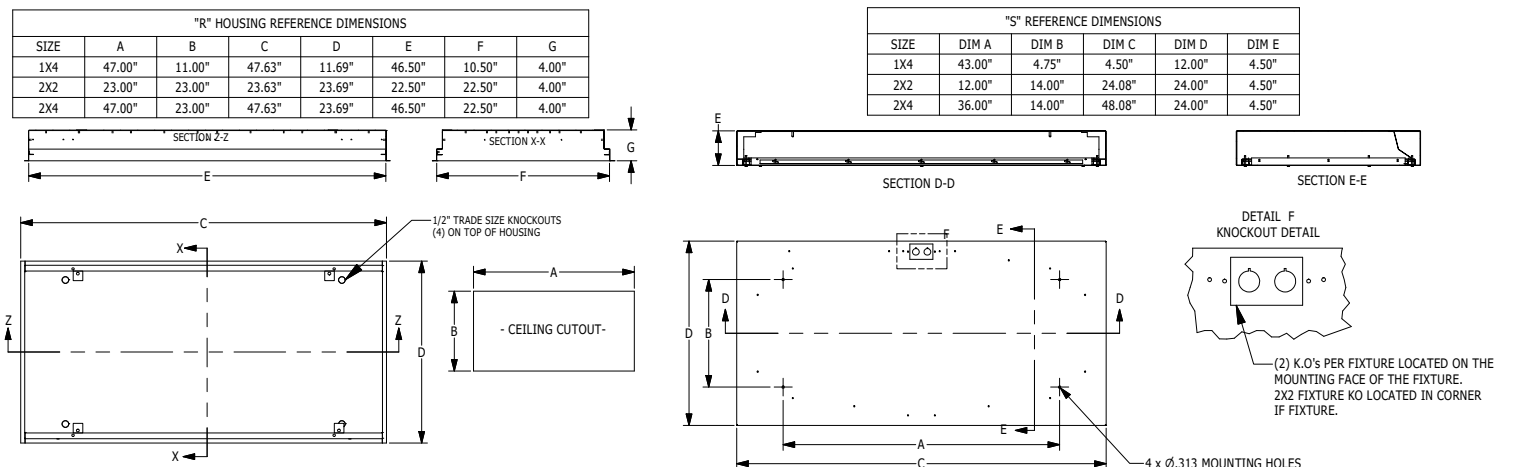
INSTALL RECESSED: One fixture suitable for Grid and Flanged installation. Accommodates 1" and 1.5" T-Bar Grid (Consult factory for 2" T-Bar Grid compatibility). Four adjustable toggle arms with holes for seismic support wire attachment. Supply entry via 1/2" trade size flattened knockouts.

INSTALL SURFACE: Four .312" dia. mounting holes and a removable gasketed wiring access plate with Supply entry via 1/2" trade size flattened knockouts.

FINISH: Gloss white high reflectance 1000 hr. salt spray polyester powder coat finish standard for all recessed housings. Stainless steel doorframes and surface housings are satin polished unless option WHT is chosen.

LISTINGS: IP65 rated for dust and water ingress. Suitable for 1700 PSI high pressure hosedowns. ETL listed per UL_1598 for wet locations. Chicago Plenum Rated. Certified ISO-14644-1 for class 3 through class 9 cleanspaces. Certified Fed Std 209E for Class 100 through Class 100,000 cleanspaces. NSF2 Listed for Non-Food Zones. Drivers and LEDs are covered by a 5 year warranty, the remaining fixture is covered by a 10 year warranty.

PRODUCT DRAWINGS



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ENERGY DATA

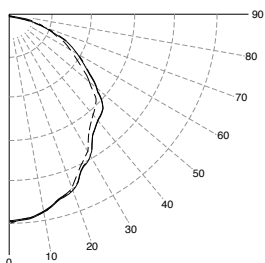
INSET-FGRS-LED TROFFER (APPROX ¹ LUMENS DELIVERED)										
ENCLOSURE SIZE	LIGHT PACKAGE	80 CRI (3000K - 5000K)				90 CRI (3500K, 4000K)				STANDARD DIMMING
		LUMENS	WATTS ²	EFFICACY ³	MAX AMB TEMP	LUMENS	WATTS ²	EFFICACY ³	MAX AMB TEMP ⁴	
1X4	1LEDR	3,970	37	106	40°C (104°F)	2,800	34	82	40°C (104°F)	0-10V 1%
1X4	2LEDR	7,955	73	109	40°C (104°F)	5,680	62	92	40°C (104°F)	0-10V 1%
1X4	2LEDH	11,468	103	112	40°C (104°F)	12,352	146	85	35°C (95°F)	0-10V 1%
1X4	2LEDHF	15,600	139	112	35°C (95°F)	14,454	182.5	79.2	35°C (95°F)	0-10V 1%
1X4	EM10	960-1030	4	NA	40°C (104°F)	850-920	4	NA	40°C (104°F)	NA
2X2	2LEDR	4,190	37	112	40°C (104°F)	2,832	32	89	40°C (104°F)	0-10V 1%
2X2	3LEDR	6,290	55	114	40°C (104°F)	4,313	48	90	40°C (104°F)	0-10V 1%
2X2	2LEDH	5,560	51	109	40°C (104°F)	5,414	73	74	35°C (95°F)	0-10V 1%
2X2	4LEDR	8,391	73	115	40°C (104°F)	5,383	62	87	40°C (104°F)	0-10V 1%
2X2	3LEDH	8,450	77	110	40°C (104°F)	8,604	110	79	35°C (95°F)	0-10V 1%
2X2	4LEDH	10,996	102	108	40°C (104°F)	10,845	146	74	35°C (95°F)	0-10V 5%
2X2	4LEDHF	20,293	171	118	35°C (95°F)	NA	NA	NA	NA	0-10V 1%
2X2	4LEDHF (1%)	16,220	138	117	35°C (95°F)	14,766	183.8	80.3	35°C (95°F)	0-10V 1%
2X2	EM10	880-1180	4	NA	40°C (104°F)	740-970	4	NA	40°C (104°F)	NA
2X4	2LEDR	9,040	74	122	40°C (104°F)	6,429	62	104	40°C (104°F)	0-10V 1%
2X4	3LEDR	13,560	111	122	40°C (104°F)	9,649	94	103	40°C (104°F)	0-10V 1%
2X4	2LEDH	14,450	103	140	40°C (104°F)	12,835	148	87	35°C (95°F)	0-10V 1%
2X4	4LEDR	18,080	146	124	40°C (104°F)	12,569	124	101	40°C (104°F)	0-10V 1%
2X4	3LEDH	21,220	153	139	40°C (104°F)	19,254	221	87	35°C (95°F)	0-10V 1%
2X4	4LEDH	27,814	205	136	40°C (104°F)	25,519	295	87	35°C (95°F)	0-10V 1%
2X4	4LEDHF	34,839	279	125	35°C (95°F)	35,344	373.3	94.7	35°C (95°F)	0-10V 1%
2X4	EM10	1020-1250	4	NA	40°C (104°F)	870-1040	4	NA	40°C (104°F)	NA

- ¹ DELIVERED LUMEN DATA IS EXTRAPOLATED FROM MEASURED DATA @ 25C WITH NO EXTRA OPTIONS. VARIANCES WILL OCCUR WHEN OPTIONS ARE CHOSEN
- ² WATTAGE IS MEASURED WITH 4000K SELECTION @ 120vAC AND Tambient = 25C. WATTAGES MAY VARY WITH ALTERNATE CONFIGURATIONS
- ³ EFFICACY CALCULATED USING 4000K CCT DATA.
- ⁴ MAX AMBIENT TEMP RATING, NON-IC INSTALLATION. TEMP RATING MAY VARY WITH SPECIFIED DRIVERS OR ANY NON STANDARD SELECTION
- ⁵ 90 MINUTE 10W EMERGENCY DRIVER; LUMENS CALCULATED BASED ON FIXTURE EFFICACY.

PHOTOMETRICS

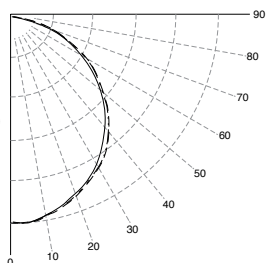
TL-R-X-2X4-4/LEDHF-835-UNV

Report No: 19676
 Total Lumens: 34,839
 Wattage: 278.69
 Efficacy: 125.0 (Lumens Per Watt)
 Fixture Size: 2'x4'
 Key:
 --- 0
 - - - 45
 _____ 90



TL-R-X-2X2-4/LEDHF-835-UNV

Report No: 19693
 Total Lumens: 20,293
 Wattage: 171.390
 Efficacy: 118.4 (Lumens Per Watt)
 Fixture Size: 2'x2'
 Key:
 --- 0
 - - - 45
 _____ 90



TL-R-5-1X4-2/LEDH-840-UNV

Report No: 20897
 Total Lumens: 11,468
 Wattage: 102.54
 Efficacy: 111.8 (Lumens Per Watt)
 Fixture Size: 1'x4'
 Key:
 --- 0
 - - - 45
 _____ 90

